

## ABSTRACT

A signal distribution system to save on the cost of cable modems for cable TV headend operators who wish to deliver broadband digital data services, DSL, video-on-demand or POTS service over their HFC CATV delivery networks. All species within the genus have a shared cable modem and a filtration and combining circuit comprised of a plurality of

5 diplexer filters or junction boxes or both which mix baseband packet data with analog CATV signals onto coax drop lines coupled to the various subscribers and connect POTS or DSL signals onto twisted pair portions of siamese cables. Various species have the cable modem feeding digital data or packets of DOCSIS or other data or digitized DSL signals sent over the HFC to the cable modem or digitized POTS signals send over the HFC to the cable modem to

10 either a packet switch, a DSL concentrator, a voice-over-IP gateway or some combination of the above. This data is either delivered to each subscriber as LAN packets or analog POTS signals or DSL signals or some combination of the above using coaxial cable or siamese cable drop lines.

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